

REMARKS

Applicants have amended independent claims 3, 55, and 69 to recite a molecular species terminating in a functional group selected to bind to the surface. Support for these amendments can be found in the specification, for example, on page 10, lines 5-7. Accordingly, no new matter has been added.

Claims 3-15, 55-59, and 69-75 remain pending for examination.

Rejections under 35 U.S.C. §102(b)

Claims 3-10 have been rejected under 35 U.S.C. §102(b) as being anticipated by Clark *et al.*, U.S. Patent No. 4,728,591 ("Clark").

Applicants do not see where in Clark is there a disclosure or suggestion of a self-assembled monolayer. Although Clark discloses a self-assembled molecular array on a surface, which can contain holes through which material can be deposited, it is not seen where a self-assembled monolayer is disclosed or suggested, as this term is understood by those of ordinary skill in the art. Furthermore, Applicants do not see where in Clark that there is a disclosure or a suggestion of a molecular species terminating in a functional group selected to bind to surface, as is recited in independent claim 3, as amended. In Clark, native proteins are deposited onto a surface, but there is no disclosure or suggestion of a protein terminating in an end having a functional group selected to bind to the surface. Accordingly, it is believed that Clark does not anticipate independent claim 3, and it is respectfully requested that the rejection of this claim be withdrawn. Claims 4-10 each depend from claim 3, and are believed to be allowable for at least the above-mentioned reasons. Withdrawal of the rejection of these claims is also respectfully requested.

Rejections under 35 U.S.C. §103(a)

Claims 11-15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Clark in view of Schnur *et al.*, U.S. Patent No. 5,077,085 ("Schnur").

Claims 11-15 each depend, directly or indirectly, from claim 3. For at least the reasons explained above with respect to the rejection under §102(b) in view of Clark, the premise of the

rejection of claim 3 (that Clark teaches all of these limitations of claim 3) is believed to be incorrect. Accordingly, while Applicants do not concede that there would have been any suggestion or motivation to combine Clark and Schnur in the manner suggested in the Office Action, the present rejection cannot stand, regardless. Thus, withdrawal of the rejection of claims 11-15 is respectfully requested.

Claims 55-59 and 69-75 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Clark and Schnur. The Patent Office maintains its position that “Schnur teaches a substrate of silicon and of metals like palladium and the addition of palladium to a substrate, thereby teaching equivalence used in supporting patterned molecular assemblies.... Thus, the claimed invention would produce the same invention and perform in the same way as Applicant as the same materials are provided by the prior art.”

Applicants respectfully disagree that Schnur teaches palladium and silicon to be equivalents. The Patent Office cites several passages in Schnur to support its position. However, it is not clear which of these passages teaches palladium and silicon to be equivalent, and several of these passages appear to be incorrect citations within Schnur. For instance, col. 8, line 46 is just “water of 85°,” and col. 9, lines 58-63 is:

404, as directed by the manufacturer (Shipley Company, Newton, Mass.). An electroless copper plating bath had also been prepared from 328A and 328Q stock solutions as prescribed by the Shipley Company which manufactured those stock solutions.

After irradiation, using the photolithography proce- [sic, line 63 ends here, with line 64 continuing “dure....”]

One passage cited by the Patent Office (Col. 7, line 65-Col. 8, line 35) includes a recitation that a “Pd/Sn colloidal catalyst” can be adsorbed on a surface, but it is not clear how this citation teaches the equivalence of palladium and silicon (Sn, of course, is tin). Accordingly, clarification of this rejection, including the citation of passages within Schnur that teach palladium and silicon to be equivalent, is respectfully requested.

Moreover, Applicants have amended independent claims 55 and 69 to recite a molecular species terminating in a functional group selected to bind to the surface. It is not seen where in Clark or Schnur is this disclosed or suggested. Thus, it is believed that independent claims 55 and

69 are patentable in view of Clark and Schnur, to the extent that these references can be combined (which Applicants do not concede), and it thus respectfully requested that the rejection of these claims be withdrawn. The remaining claims, each depend, directly or indirectly, from independent claims 55 or 69, and are believed to be allowable for at least the same reasons. Withdrawal of the rejection of these claims is also respectfully requested.

CONCLUSION

In view of the foregoing, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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